

Aerospace *and the* Business Communities

The Space Operations Management Plan and Johnson Space Center's role as Lead Center for Space Operations gathered momentum during the fiscal year. The plan, an effort to provide higher quality service at lower cost, calls for NASA to emphasize research and development while outsourcing many operational elements.

Assumption of the Lead Center for Space Operations role has increased the property for which the Johnson Space Center is responsible by almost \$6 billion. Much of the increase reflects the new responsibility for NASA's fleet of Space Shuttle orbiters.

FY 1997 saw enactment of a major outsourcing contract under which a private organization, United Space Alliance, will manage a major portion of the nation's space flight program.

Commercialization of space is another element of the Johnson Space Center's interaction with the private sector. It was the focus of the first Inspection Day in November 1996, designed to showcase space hardware and technology to potential users outside the traditional aerospace sector.

Space Flight Operations Contract

In a groundbreaking agreement, NASA and United Space Alliance signed the Space Flight Operations Contract, naming the company the single prime contractor for space flight operations. United Space Alliance is a joint venture between Lockheed Martin and Boeing. The contract, effective at the beginning of FY 1997, calls for the company to perform all Shuttle processing, ground operations, mission operations and training.

Both NASA and United Space Alliance officials believe the contract will result in more efficient and more cost effective operation of the space flight program

Consolidated Space Operations Contract

The Johnson Space Center in May called for proposals from industry to begin consolidating the Agency's human and robotic space operations capabilities. In issuing that request for proposals, the Space Operations Management Office reiterated that the change in the way NASA carries out operations will save money in routine operations

Expected to be awarded in 1998, that Consolidated Space Operations Contract is intended to be a multi-year agreement for sustaining engineering, operations and maintenance of networks, control center facilities, and other critical systems. The

eventual value of that performance-based contract is estimated at \$500 million to \$600 million a year for 10 years.

National Space Biomedical Research Institute

Another agreement was signed in January 1997 by NASA and Baylor College of Medicine of Houston, to establish a National Space Biomedical Research Institute. Baylor will lead a consortium of premier academic and research facilities ...to conduct the focused biomedical research necessary to support human health in the exploration and development of space....

NASA identified the concept of a science institute as a means of maintaining the scientific excellence of its applied biomedical research through a greater involvement of the scientific community in NASA's overall research program....

NASA-JSC Inspection

More than 1,200 top executives from companies in 28 states took advantage of the first NASA-JSC Inspection to learn about the Johnson Space Center's missions, technologies and facilities on November 13 and 14, 1996. Guests came from the manufacturing, engineering, medical, architecture, transportation, petroleum, energy and computer industries....

The objective of Inspection 96 was to showcase technologies and expertise with potential commercial applications. That was accomplished with more than 120 exhibits and demonstrations in 17 Johnson Space Center facilities. The first Inspection was such a success that the Johnson Space Center scheduled an Inspection 97 ...early in FY 1998....



Above all, 1997 demonstrated again the exceptional talent, the unmatched dedication and the unparalleled commitment of our people.

JSC *and the* Community

The Johnson Space Center has a substantial economic impact on Texas, the Southeast Texas region and the Houston-Clear Lake-area community. Indeed, it is one of the 'big three' along with petrochemicals and world-renowned medical facilities helping propel Houston's economy.

But the impact of the Center stretches far beyond financial considerations. It has a strong and growing relationship with the public which benefits both the Center and its neighbors.

The Center holds an annual open house for the public, the ultimate owners and beneficiaries of the space program. More importantly than being a host to an increasingly popular event, the Johnson Space Center and its people help preserve and popularize the heritage of the area. The Center and its people also have a positive impact on education, from the elementary through postgraduate levels.

The Center shares facilities with the community, including a modern Emergency Operations Center, that could save lives in the event of a natural disaster or other major emergency.

Economic Impact

As FY 1997 began, the Johnson Space Center's workforce on site and near the site totaled almost 15,000, including nearly 3,400 civil servants.

When the effects of money flowing across the region from salaries and Center activities is taken into account, Johnson Space Center activities are responsible for a substantially greater number of jobs.

Texas is second among the states in total NASA dollars received. In work assigned to the Johnson Space Center, almost half the Shuttle program dollars and more than 10 percent of Space Station dollars stay in Texas. Other facts of note as FY 1997 began

- ◆ About 80 percent of the NASA and Johnson Space Center budgets went to the private sector via contracts, compared to about 9 percent of the total federal budget.
- ◆ Average age of Center civil servants was 44; about 84 percent of employees had bachelor's degrees, 23 percent of those had masters and 6 percent held doctorates.
- ◆ Since it was established, Johnson Space Center budgets have totaled more than \$61 billion.

Additional impact is realized from substantial space-related tourism. Much of it results from visitors attracted by the Johnson Space Center and the independently operated visitor facility, Space Center Houston.

Community Interface

The Johnson Space Center Open House on Saturday, August 23, was perhaps FY 1997's most visible and largest interaction with the public. The theme was 'Space ... for all people.' More than 100 exhibits at more than 20 facilities drew an estimated 80,000 visitors. Vital to its success were the 1,600 volunteers - civil servants and contractor personnel - who staffed the exhibits. Among them were astronauts, scientists, engineers and administrators. The event was free, and visitors were able to move around the Center on foot or by using trams to view exhibits of interest. Nearly every aspect of space flight was featured in the comprehensive line-up of displays, demonstrations, and space hardware. Mission operations, Shuttle and Space Station training and simulations, robotics and virtual reality, manufacturing and fabrication, spacecraft propulsion and energy systems, space communications, life support and space

suits, and a wealth of science investigations were included.

Visitors saw facilities that benefit the community, as well as being resources for the Johnson Space Center. Other less visible facilities and programs also offer substantial benefits to the community....

- ◆ The modern, 4,000-square-foot Emergency Operations Center is designed to respond to any of a range of emergencies that could affect the Johnson Space Center and neighboring communities. More than a third of the Emergency Operations Center has been reserved to augment community emergency operations....
- ◆ The Johnson Space Center Educator Resource Center was relocated during FY 1997 to Space Center Houston. The facility contributes to the nation's educational goals by giving teachers the tools to expand and enhance the scientific and technological competence of their students....
- ◆ Texas Independence Trail Riders and Longhorn Cattle highlighted the Johnson Space Center's 'Go Western Day' February 5, 1997. Dedication of the JSC Longhorn Project, a piece of Texas heritage and Texas' future, was held before about 1,000 people -

among them trail riders, aerospace workers and educators. ... The Longhorn Project will offer students the opportunity to learn about cattle care and breeding, aquaculture, and fruit and vegetable cultivation.

- ◆ More than 225 Johnson Space Center and contractor employees visited more than 350 area classrooms during February, the month (of) National Engineers Week
- ◆ A collaborative education venture to locate a Clear Creek Independent School District intermediate school at the Johnson Space Center was announced in late May.... The school will be on about 35 acres on the southwest corner of the Johnson Space Center. It is expected to be completed by the fall of 1999.
- ◆ Twenty-three teams of undergraduate students from U.S. colleges and universities flew with their scientific and engineering experiments on the KC-135 zero-gravity aircraft....

As impressive as they are, these are only a few examples of the broad range of volunteering, giving and preparation that make the Johnson Space Center a good neighbor and a good friend, in normal times and times of need.

Chief Financial Officer's Statement

I am pleased to present the Johnson Space Center's annual financial report for Fiscal Year 1997. The financial statements describe the Center's financial position and the results of operations for the year - a period of substantial change in the way the Center and NASA as a whole interface with the aerospace industry.

The Space Flight Operations Contract, effective at the beginning of the fiscal year, combined several Shuttle contracts into one prime contract administered at the Johnson Space Center, the lead center for space flight operations. Previously, many of these contracts were administered by other centers. This change, which increased the Center's management responsibilities, is a major step toward outsourcing operations with consolidated contracts.

Another contract initiative is the Consolidated Space Operations Contract. In May, Johnson Space Center called for proposals from indus-

try to consolidate the Agency's human and robotic space operations capabilities. This contract, to be awarded next year, will be a multi-year agreement for sustaining engineering, operations and maintenance of networks, control center facilities, and other critical systems. This contract change reiterates the theme that we plan to change the way NASA conducts operations to enable more of our resources to focus on research and development and on core competencies. A change directly influencing our financial community was the Agency award in September 1997 of the Integrated Financial Management Project contract. Implementation of this contract will change the funda-



Draper

mental procurement, budget, finance, travel, time and attendance, and management information reporting systems for the Johnson Space Center, joining them into one integrated system with the whole Agency.

There has been substantial change this year in our total program and operating expenses. In FY 1996, these expenses were \$2.9 billion; in FY 1997 they grew more than 10 percent to \$3.2 billion. Even more striking is the growth in Johnson Space Center assets, from \$6 billion in FY 1996 to \$12 billion in FY 1997 - a 100 percent increase. This growth is due primarily to the Space Flight Operations Contract and the increase in International Space Station hardware elements.

Fiscal Year 1997 was an exciting year for the Johnson Space Center. The financial state of health at Johnson Space Center is good. We are well prepared for the challenges facing us in the future.

Wayne L. Draper



"Man must rise above the Earth - to the top of the atmosphere and beyond - only thus will he fully understand the world in which he lives."

—Socrates, 500 BC